NWT WATER STEWARDSHIP STRATEGY IMPLEMENTATION

PROGRESS REPORT

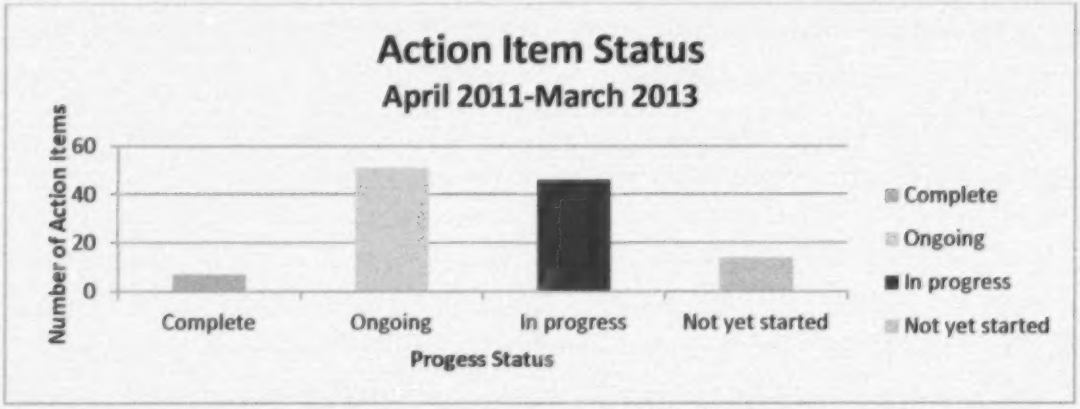
APRIL 2011-MARCH 2013

The waters of the Northwest Territories
will remain clean, abundant and productive for all time

Summary

NWT residents want access to safe, clean and plentiful drinking water and healthy aquatic ecosystems to sustain their communities, culture and economies. Many residents want to be involved in and knowledgeable about water stewardship. The *Northern Voices, Northern Waters: NWT Water Stewardship Strategy* (Water Strategy) vision is to ensure *the waters of the Northwest Territories will remain clean, abundant and productive for all time.*

The Water Strategy and the *NWT Water Stewardship: A Plan for Action 2011-2015* (the Action Plan) create a platform where people can work together to safeguard our waters. This progress report summarizes activities that have been carried out by different groups that contribute to achieving the vision and goals of the Water Strategy. The graph below summarizes the overall progress on action items between April 2011 and March 2013.



Water partners have focused on several priority areas for implementing the Water Strategy:

- Negotiating a water agreement with Alberta;
- Increasing community-based monitoring;
- Developing regulatory guidance;
- Planning to protect the sources of drinking water; and
- Building community capacity for monitoring required for municipal water licences.

These priority areas reflect some of the many water stewardship activities in the NWT. Additional to these priority areas, there are many water stewardship activities that are discussed in this report. Activities include information sharing and storing, general water monitoring activities, developing and strengthening partnerships, and the importance of traditional knowledge in decision-making. The report highlights successes and areas with room for improvement brought forward during the January 2013 NWT Water Stewardship Strategy implementation workshop titled *Strengthening Our Progress*. The report outlines how we can better share resources and work together in the future to strengthen the implementation of the Water Strategy.

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1.0 Purpose and Background

Water and aquatic ecosystems are important to northerners. In the Northwest Territories (NWT), we rely on water for drinking, travel, spiritual, recreational and cultural uses, and to sustain healthy aquatic (water) and terrestrial (land) ecosystems. To ensure protection of our waters and aquatic ecosystems, all northerners have a responsibility to work together to make sound, informed decisions about the ways we use, manage and protect our water.

1.1 Purpose and Content of the Progress Report

This progress report communicates our water stewardship successes, and identifies the areas where we need to improve. It is an important tool to ensure that people across the NWT are aware of what water partners, including the general public, are doing to safeguard our precious northern waters. This is the first progress report following the release of *Northern Voices, Northern Waters: NWT Water Stewardship Strategy* and the *NWT Water Stewardship: A Plan for Action 2011-2015*.

Activities undertaken between April 2011and March 2013, and outcomes from the January 2013 NWT Water Stewardship Strategy implementation workshop titled *Strengthening our Progress*, are highlighted in the progress report. Specific successes and areas with room for improvement are listed only for activities discussed during the workshop. Subsequent progress reports, with updates on new, ongoing and completed activities will continue to be released on an annual basis.

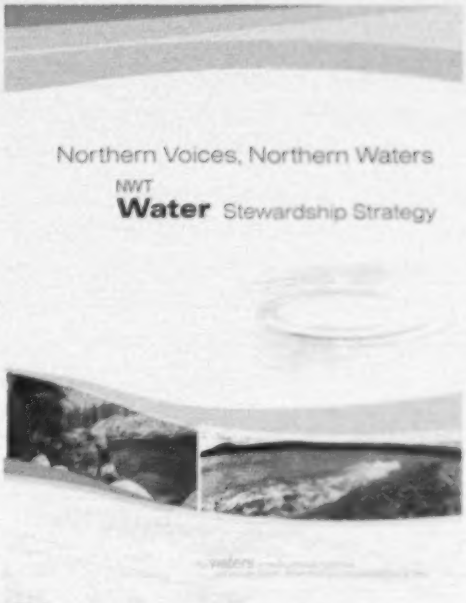
The progress report will update northerners, water partners and interested parties on implementation activities and identify:

1) our achievements to date;

2) successes and areas with room for improvement identified during the January 2013 workshop; and

3) conclusions on how to strengthen our progress for future implementation.

1.2 Background



Northern Voices, Northern Waters: NWT Water Stewardship Strategy (the Water Strategy) sets a common path forward for achieving good water stewardship in the NWT. The process began in 2008 when the Government of the Northwest Territories, GNWT and Aboriginal Affairs and Northern Development Canada (AANDC) started working with representatives from Aboriginal governments to develop a strategy to address concerns about freshwater in the NWT. An Aboriginal Steering Committee was formed to ensure that Aboriginal governments guided the development of the Water Strategy. After many collaborative planning workshops and meetings with partners, community tours and a thorough review by the Aboriginal Steering Committee, the Water Strategy was released in 2010.

The collaboration and involvement of many water partners was critical to the development of the Water Strategy and continues to be as we move through its implementation. Partners involved include the Government of Canada, the GNWT, Aboriginal governments, regulatory boards and agencies, non-governmental organizations, industry, and universities and colleges. Partnerships are a core component and inform many areas of the Water Strategy from the guiding principles to implementation activities. The Aboriginal Steering Committee continues to play a key role in shaping the direction of implementation initiatives and activities. For a full list of water partners and their roles and responsibilities, please see Appendix 1 or visit www.nwtwaterstewardship.ca

The Water Strategy sets a vision, guiding principles and goals, and identifies Keys to Success for achieving sound, collaborative water stewardship in the NWT. The Water Strategy does not affect Aboriginal water rights in the NWT.

Aboriginal Water Rights in the NWT

The NWT Water Stewardship Strategy does not alter existing water management responsibilities. It does not affect or infringe upon existing or asserted Aboriginal rights, treaty rights, or land, resource and self-government agreements. In the case of any inconsistency between the Water Strategy and existing or future treaties or land, resource and self-government agreements, the provisions of the treaties shall prevail.

1.2.1 Vision

The vision of the Water Strategy is "***the waters of the Northwest Territories will remain clean, abundant and productive for all time***". Northerners must all work together to realize this vision now and into the future.

1.2.2 Guiding Principles

Several guiding principles frame the implementation of the Water Strategy and set out good practices for our partnerships and activities, and how we use our water in the long term. These guiding principles are:

Respect

- Water stewardship decisions respect values held and various lifestyles chosen by NWT residents. These include spiritual, cultural, public health, recreational, economic and ecological values.
- Water stewardship decisions respect Aboriginal rights or treaties including land, resource and self-government agreements.

Sustainability

- Water stewardship decisions sustain healthy and diverse aquatic ecosystems over time. They maintain the ability of current and future generations to choose their way of life.

Responsibility

- Water stewardship is a collective responsibility. Each of us must make thoughtful decisions about our actions that may affect NWT aquatic ecosystems.

Knowledge

- Water stewardship decisions are based on accurate and up-to-date traditional, local and western scientific knowledge[1].
- As knowledge evolves, stewardship decisions evolve accordingly.
- Where there are threats of serious or irreversible damage to aquatic ecosystems, lack of certainty is not used as a reason to postpone effective measures that can avert the potential threat.

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[1] Western science must be accurate and up to date while traditional and local knowledge must be accurate, as it inherently does not need to be up to date. Traditional and local knowledge will be verified by the Aboriginal government/group providing the information.

Accountability

• Water stewardship decisions are made in an informed, transparent and participatory manner. Those who make decisions must be held responsible for the consequences of those decisions.

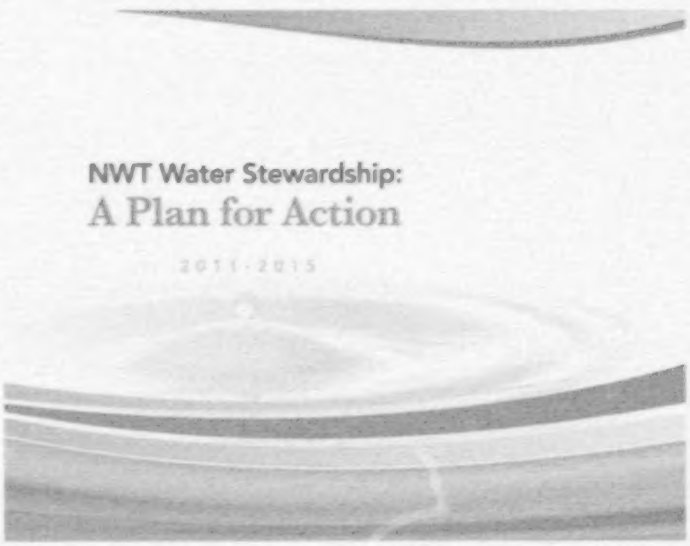
1.2.3 Goals

There are six goals of the Water Strategy:

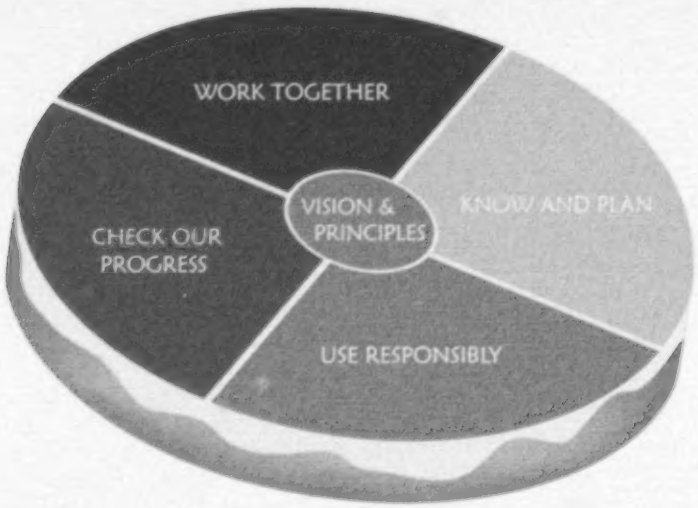
- Waters that flow into, within or through the NWT are substantially unaltered in quality, quantity and rates of flow;
- Residents have access to safe, clean and plentiful drinking water at all times;
- Aquatic ecosystems are healthy and diverse;
- Residents can rely on their water to sustain their communities and economies;
- Residents are involved in and knowledgeable about water stewardship; and,
- All those making water stewardship decisions work together to communicate and share information.

1.2.4 NWT Water Stewardship Action Plan

In 2011, *NWT Water Stewardship: A Plan for Action 2011-2015* (the Action Plan) was released. This Action Plan provides the "blueprint" for implementing the Water Strategy.



There are four components, or areas of action, captured in the Action Plan (see drum diagram):



1) Work Together

Actions ensure all water partners have the information and resources needed to collaboratively achieve the vision and goals of the Water Strategy and to effectively integrate its vision and goals with other resource planning and management processes in the NWT. Work Together actions fall into four main areas:

- Partnerships
- Information Management
- Communication and Engagement
- Transboundary Agreements and Obligations

2) Know and Plan

Actions support the development and implementation of collaborative research and monitoring programs. Incorporating traditional, local and western scientific knowledge in these programs improves the collective understanding of health and diversity in the NWT. Know and Plan actions fall under two main areas:

- Aquatic Ecosystems, Water Quality and Quantity
- Community-based Monitoring

3) Use Responsibly

Actions support sound water stewardship through the development and implementation of programs, practices and guidance for environmental assessment, regulatory and enforcement processes. Use Responsibly actions fall into three main areas:

- Policy, Procedures and Protocols
- Evaluate and Amend Existing Legislation
- Compliance

4) Check Our Progress

Check Our Progress is an active feedback loop to ensure that water stewardship initiatives are working towards the vision of the Water Strategy. The evaluation criteria for Check Our Progress must be objective, accountable and directly linked to the Water Strategy's goals. Check Our Progress actions fall into two main areas:

- Routine Checks
- Formal Audits

A series of Keys to Success were developed for each of the four component areas. Several action items were identified for each Key to Success, along with lead water partners and timelines for achieving the action items. Examples of Keys to Success from the Action Plan are highlighted below.

1.1	**Work Together – Partnerships** Partnerships are essential for water stewardship in the NWT. No one agency is entirely responsible for water stewardship and no agency or individual is without responsibility for it. Partnerships can take many forms, including partnerships among decision-makers, funding partnerships, networking partnerships and data sharing partnerships.	
Key to Success 1.1 A	**Integrate the NWT Water Stewardship Strategy with current territorial watershed and natural resource planning and management frameworks, such as the Environmental Stewardship Framework and regional land use plans.**	
	Lead Agency: ENR/INAC Partners: All Water Partners	
	Action Items	**Deliverable Date**
1	Water partners identify and share existing policies, strategies, frameworks, procedures, regional land use plans, interim measures agreements and other agreements that are related to the Strategy.	April 2012

2.1	**Know and Plan – Aquatic Ecosystems, Water Quality and Quantity**	
Key to Success 2.1 A	**Undertake a review of existing aquatic monitoring programs, practices and research activities in the NWT, and identify and prioritize gaps.**	
	Lead Agency: ENR/INAC Partners: Fisheries and Oceans Canada, Environment Canada, Regulatory Boards, Industry, Academia	
	Action Items	**Deliverable Date**
1	Identify existing monitoring programs and research activities in the NWT and compile into a report.	December 2011 and On-going
2	Review current monitoring and research activities for adequacy and identify and compile information gaps.	September 2012 and On-going
3	Collaborate with water partners to prioritize gaps with regard to goals of the Strategy.	April 2013 and On-going
4	Develop or improve existing monitoring and research activities to address identified gaps.	December 2014

For more information:

Visit www.nwtwaterstewardship.ca for more information about water stewardship in the NWT, the Water Strategy, Action Plan, and annual workshop reports.

This progress report highlights activities which have taken place between April 2011 and March 2013 as well as some successes and areas with room for improvement discussed during the workshop. Implementation of the Water Strategy can continue to be strengthened and grow. We invite any comments, questions or feedback on the implementation of the Water Strategy.

Contact us:

Land and Water Division

Environment and Natural Resources, Government of the Northwest Territories
600, 5102-50th Avenue, P.O Box 1320, Yellowknife, NT X1A 2L9
Telephone: (867) 920 6339 Fax: (867) 873-0293
Email: nwtwaterstrategy@gov.nt.ca

Northwest Territories Environment and Natural Resources

Water Resources Division

Renewable Resources and Environment, Aboriginal Affairs and Northern Development Canada
2nd floor, Gallery Building, 4923 - 52nd Street, P.O. Box 1500, Yellowknife, NT X1A 3Z4
Phone: (867) 669-2655 Fax: (867) 669-2716
Email: NorthwestTerritoriesWaters@aandc-aadnc.gc.ca

Aboriginal Affairs and Northern Development Canada | Affaires autochtones et Développement du Nord Canada

2.0 Achieving the Keys to Success

Many activities have been undertaken to successfully implement the Keys to Success outlined under the four components in the Action Plan: Work Together, Know and Plan, Use Responsibly, and Check Our Progress (see Section 1.0). For a full listing of the Keys to Success see the Action Plan on our NWT Water Stewardship website at www.nwtwaterstewardship.ca

The results presented in Section 2.0 include:

1) progress on action items identified in the Action Plan that took place between April 2011 and March 2013; and
2) outcomes from the January 2013 NWT Water Stewardship Strategy Implementation Workshop titled *Strengthening our Progress.*

The *Strengthening our Progress* workshop reviewed ongoing implementation of the Action Plan and discussed the strategic direction for future activities. This was done by learning from and building on the successes to date, and acknowledging where there is room for improvement. Successes and areas with room for improvement are highlighted for the Keys to Success discussed during the workshop. Summaries of other activities are provided throughout the progress report.

All water partners are invited to report on their contributions toward achieving the Keys to Success on the NWT Water Stewardship website and in future progress reports.

2.1 Work Together

Work Together actions focus on how we share information about water and work together to achieve the vision and goals of the Water Strategy. Several Keys to Success under Work Together have been implemented and are highlighted below. These Keys to Success focus on partnerships, information management, communication and engagement, and transboundary discussions, agreements and obligations. The work completed to date is discussed along with successes and areas with room for improvement brought forward by water partners during the January 2013 workshop.

Figure 1 below highlights progress on Work Together action items covering the period from April 2011 - March 2013.

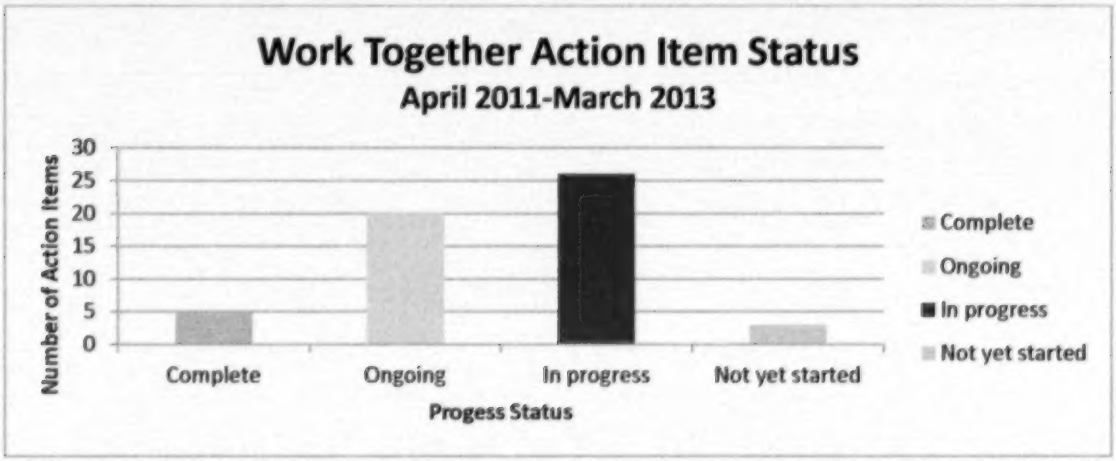


Figure 1: Status of Work Together action items since the release of the Action Plan.

2.1.1 Water Partnerships

Sound water stewardship involves strong, collaborative partnerships between NWT water partners (see Appendix 1 for the full list). Several Keys to Success under 1.1 in the Action Plan are focused on partnerships. Below is a list of water partnerships that continue to be developed to strengthen the Water Strategy's overall objectives, implementation of specific Keys to Success, and other water stewardship activities across the NWT.

2.1.1.1 External Partnerships

External partnerships, including partnerships outside the NWT, have been very positive for the Water Strategy and NWT water partners. These partnerships provide Water Strategy initiatives with expertise and external funding. During the January 2013 workshop, an area with room for improvement pertaining to external partnerships was identified.

Workshop Outcome - Room for Improvement:

- Given the human and financial resources required to establish and maintain each partnership, it is challenging to foster external partnerships while making sure all water partners' needs are addressed.

Examples of existing external partnerships, some of which began prior to the Water Strategy's release, and others that were formed as a result of the Water Strategy between April 2011 and March 2013 as follows:

Canadian Council of Ministers of the Environment - Water

The GNWT and the Government of Canada participate in the Canadian Council of Ministers of the Environment's water partnership initiatives to advance five water goals: sustaining aquatic ecosystems in watersheds; conservation and wise use; improving water management; adapting to climate change impacts; and sharing knowledge about Canada's water. Each year priorities are reviewed, action plans are set and reports are published to address these goals. For more information go to www.ccme.ca/ourwork/water.html

Council of the Federation - Water Stewardship Council

The Council of the Federation, which seeks to promote interprovincial-territorial cooperation, established the Water Stewardship Council in 2011. This initiative brings together provincial and territorial participants to collaborate on challenges related to water quality, water conservation, and changes in the future from climate change. Key initiatives include: promotion of Canada Water Week; water information sharing; drinking water for small and rural communities; and value of water. For more information on the Water Stewardship Council and its initiatives, go to www.councilofthefederation.ca/keyinitiatives/water.html

Mackenzie River Basin Board

The Mackenzie River Basin Board is a cooperative forum to inform and advocate for the maintenance of the ecological integrity of the entire Mackenzie River Basin. In 1997, the Governments of Alberta, Saskatchewan, British Colombia, Yukon, Northwest Territories and Canada signed the Mackenzie River Basin Transboundary Waters Master Agreement. The Master Agreement established the Mackenzie River Basin Board to help transboundary jurisdictions deal with concerns in the Basin in a cooperative manner. There are 13 members of board, including representatives from AANDC, Environment Canada, Health Canada; provincial/territorial governments of the NWT, Yukon, Alberta, British Columbia, Saskatchewan, and Aboriginal representatives from each province and territory. For more information go to www.mrbb.ca

Peace-Athabasca Delta Ecological Monitoring Program

Government of the Northwest Territories, Department of Environment and Natural Resources (GNWT-ENR) and AANDC have participated in the Peace-Athabasca Delta Ecological Monitoring Program (PADEMP) since 2008. PADEMP's mandate is to measure, evaluate and communicate the state of the Peace-Athabasca Delta ecosystem, including cumulative impacts from regional developments and climate change.

Participants in the monitoring program include representatives from several Aboriginal groups from the NWT and Alberta, non-governmental organizations, and federal, territorial and provincial governments.

PADEMP is currently conducting a vulnerability assessment on the Peace-Athabasca Delta based on both western science and traditional knowledge perspectives. The assessment will look

at a number of environmental stressors and their impacts on different components of the delta ecosystem, and outline research and monitoring priorities.

Wilfrid Laurier University - NWT Partnership Agreement
GNWT-ENR and Wilfrid Laurier University entered into a partnership agreement in 2010 following the release of the Water Strategy, to help implement Keys to Success under 2.1 of the Action Plan. The purpose of the agreement is to support and expand NWT environmental research and education through the provision of new infrastructure and scientific expertise.

Through the partnership, GNWT-ENR and Wilfrid Laurier University collaborated on a series of workshops in 2011/2012 to identify opportunities for research and training in the NWT. A science committee was formed, which includes representatives from GNWT-ENR, AANDC, and Wilfrid Laurier University. The committee determines research priorities and allots funding to appropriate projects, including community-based aquatic monitoring activities.

Please see www.wlu.ca/homepage.php?grp_id=12612 for more information on the partnership agreement, research projects and participants.

Canadian Water Network
A partnership between GNWT-ENR, the Slave River and Delta Partnership and the Canadian Water Network was established to implement Keys to Success 2.2 for community-based monitoring and Key to Success 2.11 for cumulative effects monitoring.

In 2012, the partners held a workshop in Yellowknife to guide the development of community-based monitoring in the NWT, focusing on key questions and community concerns. Participants discussed the critical topics of water quality, hydrology, sediment load, fish health, and benthic invertebrates in the Slave River and Delta area. Community capacity building and the appropriate use of traditional knowledge in monitoring and research were also discussed in detail during the workshop.

As an outcome of the workshop, a research project has been developed to strengthen the ongoing activities in the South Slave region. This two-year project will develop a cumulative effects monitoring framework for community-based monitoring. Follow the project's development online at www.nwtwaterstewardship.ca

2.1.1.2 Internal Partnerships

Successful collaborations between NWT water partners can be developed when the groups involved begin to work together early in the process. Maintaining open communication, realistic expectations, willingness to help each other, and respect and awareness of each other's differences, are all important for the development of partnerships.

When developing partnerships with communities, it is important to visit the community and talk to leadership and community members. During the January 2013 workshop, successes and areas with room for improvement related to internal partnership were identified.

Workshop Outcomes - Successes:

- The Slave River Partnership is a good example of how communities, agencies, universities, and governments can work together to address concerns.
- Good partnerships can be developed when partners have realistic expectations and everyone has the willingness to help each other.

Workshop Outcomes - Room for Improvements:

- In the NWT, we need to talk to each other more as water partners, either face to face or through regular phone calls. To implement the Action Plan, we need to know our water partner's needs and form a support network between the water partners.
- To have effective internal partnerships we need to identify and understand communication barriers. These barriers can be overcome by focusing on non-text based information sources, such as videos and radio messages.

The following is one example of an internal partnership. To read more about internal partnerships see *2.2.3.3 Specific Community-based Initiatives*.

Managing Drinking Water in the NWT
To ensure safe drinking water in the NWT, community governments work with the GNWT departments of Health and Social Services, Municipal and Community Affairs, Public Works and Services and Environment and Natural Resources and other partners on drinking water initiatives. These initiatives include an annual report on drinking water quality, a water quality database, information about measured parameters, monitoring protocols and other advice and information. For more information go to www.maca.gov.nt.ca/?page_id=1659

The GNWT departments routinely collaborate on issues related to community water and wastewater, including community source water protection assessment and planning (For more information see *2.2.4 Source Water Protection*).

2.1.2 Information Management

The Water Strategy highlights the importance of effective decision-making at all levels, which is supported by accurate and current data. Progress on information management Keys to Success under section 1.2 of the Action Plan is outlined below along with highlights and an area with room for improvement brought forward by water partners during the January 2013 workshop.

2.1.2.1 Alternative Technological Tools for Water Monitoring

In the Action Plan there are action items related to geomatics tools, such as remote sensing, and the collection and processing imagery and data (Keys to Success 1.2A and 1.2B). Using these alternative tools provides added value to current water-related monitoring and research and a mechanism to help fill identified information gaps.

Satellite imagery is a product of remote sensing and has been used as a tool to map areas in the NWT to identify landscape changes. Landsat is one type of satellite that has been collecting imagery of the NWT for the past 30 years. Comparing older images to present day images allows for identification of changes in the landscape including the effects of slumps[2], forest fires, re-growth, changes in water levels that can impact vegetation, and human caused change such as forestry and seismic lines.

A project funded by NWT Cumulative Impact Monitoring Program (NWT CIMP) outlines examples of how remote sensing technology can be used as a tool for water-related monitoring. For more information about NWT CIMP see *Know and Plan*.

2.1.2.2 NWT Discovery Portal – Research and Monitoring Tool

The NWT Discovery Portal is a website providing a central location for environmental monitoring knowledge in the NWT. Users can search the virtual library or add to it by sharing their own monitoring information. It is a joint initiative between AANDC (NWT Cumulative Impact Monitoring Program (NWT CIMP)) and the GNWT (Centre for Geomatics).

The Portal contains:

- Descriptions and locations of monitoring data
- Links to external reports and data sources
- Scientific monitoring data and reports
- Maps, presentations, videos, images

The Portal can be used to search for data (by keyword or by map) and to upload data. Scientists, community members, regulators, industry, and anyone with environmental monitoring information can contribute to the Portal's content.

The two lead government departments are developing programs to "harvest" data (automatically transfer) from other databases. Depending on the format of the information, some information will have to be uploaded manually.

To access the NWT Discovery Portal go to http://nwtdiscoveryportal.enr.gov.nt.ca

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[2] Large craters in the landscape created largely by melting permafrost. For more information see Section 2.2.3.3 *A Watershed Approach to Monitoring Cumulative Impacts of Landscape Change*.

During the January 2013 workshop, a success and an area with room for improvement pertaining to the Portal were identified.

Workshop Outcomes - Success:

- The Portal was successfully launched in 2011. GNWT (Informatics ENR-ITI) and AANDC (NWT CIMP) are developing an instructional video and can provide training on how to use the Portal. A user manual is available at http://nwtdiscoveryportal.enr.gov.nt.ca:8080/geoportal/help/NWT_Discovery_Portal_User_Guide_v2_noDraft.pdf

Workshop Outcomes - Room for Improvement:

- To implement the Key to Success pertaining to the NWT Discovery Portal (1.2D), resources will be needed to train partners on how to use and populate the Portal.

2.1.3 Communication and Engagement

Communication and engagement promote strong partnerships and support the work of water partners involved in water stewardship activities across the NWT. Effective communication and engagement ensure that water partners and the public have the necessary information about water in the NWT and can work together to make positive water stewardship decisions. Communication and engagement action items are outlined in Keys to Success 1.3A, 1.3B and 1.3C, but are also fundamental to the completion of all Keys to Success in the Action Plan.

Progress on these Keys to Success is outlined below along with successes and areas with room for improvement brought forward by water partners during the January 2013 workshop.

2.1.3.1 NWT Water Stewardship Strategy Workshops

Two workshops have taken place with water partners since the release of the Action Plan, as part of the ongoing communication and engagement required to implement the Water Strategy. These activities are identified under Key to Success 1.3A.

In November 2011, a workshop titled *Keeping up the Momentum* provided water partners with updates on the implementation of the Water Strategy, and shared ideas on ways to collectively advance implementation of the Water Strategy in the future. Presentations and discussions were focused primarily on Keys to Success with 2011 deliverable dates. The workshop report is available online at www.nwtwaterstewardship.ca/?q=publications

In January 2013, a second workshop titled *Strengthening our Progress* reviewed ongoing implementation activities, and developed a strategic path forward based on the outcomes to date.

These outcomes are highlighted in Section 2.0 under relevant sub sections, and are also included in the future priorities listed in Section 3.0.

2.1.3.2 Website Development

An action item identified by water partners early on was the need for a water stewardship website. A website has been developed as a one-stop shop for information about NWT waters, water-related research and monitoring activities, water-related community-based projects, and updates on the Action Plan's implementation progress.

Many NWT water partners, including representatives from Aboriginal governments, federal and territorial departments, regulatory boards, renewable resource boards, and environmental non-government organizations reviewed the website content. As a result, the website has been revised to better reflect the activities of all water partners in the NWT and to ensure it is functional, useful and easy to navigate.

The website was officially launched in April 2013. To view the NWT Water Stewardship website, please visit www.nwtwaterstewardship.ca

To highlight new or up-coming water-related activities, or provide comments, questions or feedback about the website, email nwtwaterstrategy@gov.nt.ca

2.1.3.3 Canada Water Week/World Water Day Activities

Canada Water Week is a week-long celebration of water from coast-to-coast-to-coast coinciding with World Water Day on March 22nd. Canada Water Week promotes water stewardship, raises public awareness about water and educates residents about the potential impacts some activities might have on water.

In 2012, NWT water partners worked together to deliver exciting and engaging activities for World Water Day and Canada Water Week. That year, a key activity was the revision and distribution of water curriculum for Grade 6-9 students. This curriculum was developed to increase awareness of water stewardship and conservation. The lesson plans focus on drinking water in the NWT, including local water treatment systems and bottled water. Activities associated with this curriculum were implemented in several classrooms, including in Fort Smith, Fort Resolution, Yellowknife, Lutsel K'e, Trout Lake, Nahanni Butte and Hay River. The curriculum is available online at www.nwtwaterstewardship.ca/?q=education

In 2012, a series of public events were held in several communities, including a water-themed public movie and discussion night in Fort Smith and Hay River, and screening of the CBC documentary "The Tipping Point, the Age of Oil Sands" was shown in Lutsel K'e. A panel discussion on NWT groundwater hosted by Ecology North and the Pembina Institute was held in Yellowknife.

Other public education based events to promote water stewardship included an NWT-wide photography contest, and water-themed family events held in Yellowknife at the Prince of Wales Northern Heritage Centre as part of the Amazing Family Sundays' series, and at the Snow Castle.

In 2013, GNWT-ENR collaborated with the non-government organization Ecology North to carry out a water education and communication tools workshop for NWT water partners. This included a speaker's panel on research in the oil sands region, an NWT-wide art contest, school outreach activities in various communities to learn about drinking water and implement the curriculum developed in 2012, and family activities at the Snow Castle in Yellowknife.

2.1.3.4 Northern Voices, Southern Choices Tour

In the North, we recognize how our choices, and the choices of others outside the NWT, can impact our waters, fish, plants and wildlife. To bring the voices of northerners to the south and promote our made-in-the-north Strategy as a model for water stewardship across Canada, the Forum for Leadership on Water (FLOW) held a cross-Canada discussion series called Northern Voices, Southern Choices. These public events were held in October and November 2011. The NWT was highlighted as having an innovative water strategy from which other Canadian jurisdictions could learn.

For further information see www.flowcanada.org/cross-country-tour and the Forum for Leadership on Water's fall 2011 newsletter at www.flowcanada.org/sites/default/files/newsletters/FlowMonitor_FALL%202011_email_1.pdf

2.1.3.5 Plan for Communication, Engagement and Public Education

The GNWT-ENR and AANDC continue to work on effective, meaningful and accessible ways to provide information about water stewardship to all residents of the NWT, and to engage water partners with an interest in water stewardship activities. A plan is being developed to address communication, engagement and public education with the public and water partners. This will ensure water partners can engage in Water Strategy activities, and ensure the public, and particularly youth, are educated about the importance of water stewardship.

During the January 2013 workshop, several successes and areas with room for improvement pertaining to communication, engagement and public education were identified.

Workshop Outcomes - Successes:

- GNWT-ENR's 2012 and 2013 water calendars were a success, gaining popularity among the different NWT water partners and communities. The calendars include useful plain language information about funding sources for community-based monitoring and source water protection.

- Regular meetings with the Aboriginal Steering Committee have provided updates and improved communication with the Aboriginal governments of the NWT.
- The vision and the goals of the Water Strategy have been shared nationally through collaborations like the Forum for Leadership on Water, as well as keynote speakers at events like the Assembly of First Nations (*Water Rights Conference 2012- Asserting our Rights to Water)*.
- Water partners spread the message of the Water Strategy through the Canadian Council of Ministers of the Environment and associated working groups.

Workshop Outcomes - Room for Improvements:

- More communication with communities is important. Visiting communities is an excellent way to share information with people and discuss the importance of the Water Strategy. Teleconferencing can be a very useful tool when travelling to communities is not possible. Radio advertisements, especially in Aboriginal languages, have been suggested as a communication tool with a wide reach to all NWT residents.
- More Water Strategy products and materials need to be translated into the Aboriginal official languages and be made plain language.
- Greater promotion of developed water curriculum to deliver water messages to schools is needed.
- A plan to address communication, engagement and public education should be finalized and implemented. This plan will formally guide GNWT-ENR and AANDC in communicating and engaging with different target groups, and thereby more effectively reach out to all NWT residents and water partners.
- There is a need for increased regular communication about the Water Strategy and updates on new initiatives in the periods between annual workshops (e.g., a newsletter or other communication tool). NWT partners identified the website as important for promoting the Water Strategy and providing updates on its implementation (website was launched in April 2013 at www.nwtwaterstewardship.ca).
- According to some water partners more support from the federal departments is needed. Improved communication could increase the understanding of the importance of the Water Strategy federally.

2.1.4 Traditional Knowledge

Traditional knowledge provides valuable information and guidance and has shaped the development and implementation of the Water Strategy. An integral part of the Water Strategy is to include traditional knowledge in water stewardship decision-making in the NWT. Keys to Success 1.2G and 1.2H in the Action Plan seek to develop and implement processes promoting the use of traditional knowledge in ways that help ensure water stewardship activities respect community values. Specific action items under these Keys to Success include:

- Collect all available traditional knowledge protocols and share among water partners;
- Support the implementation of traditional knowledge protocols;
- Include traditional knowledge in partner planning activities and decision-making processes; and,
- Engage with Aboriginal governments and communities to identify ways to use traditional knowledge in water stewardship activities.

One of the key areas being addressed is creating an inventory of traditional knowledge protocols in use in specific regions and communities. This process began in 2011. The following traditional knowledge protocols were compiled, and others are being developed:

- Gwich'in Social and Cultural Institute Traditional Knowledge Policy (2004)
- Dehcho First Nations Traditional Knowledge Research Protocol (2004)
- Mackenzie Valley Review Board Guidelines for Incorporating Traditional Knowledge in Environmental Impact Assessment (2005)
- Sambaa K'e Dene Band Policy Regarding the Gathering, Use, and Distribution of Traditional Knowledge (2003)
- Traditional Knowledge Guide for the Inuvialuit Settlement Region Volume I (2008)
- Traditional Knowledge Guide for the Inuvialuit Settlement Region Volume II (2008)

Work is ongoing to ensure traditional knowledge is included in all aspects of the Water Strategy's implementation. Traditional knowledge is an integral part of designing community-based monitoring programs, is used in source water protection planning, and informs transboundary water agreement negotiations with Alberta. Partners continue to collaborate with Aboriginal governments and communities to develop, implement, promote, and improve the use of traditional knowledge in the implementation of the action items outlined in the Action Plan.

Traditional knowledge has been and continues to be used in other areas of water stewardship decision-making in the NWT, including environmental assessment processes, permitting by regulatory boards, the development of management plans and research priorities by renewable resource boards, and land-use planning by land use planning boards.

2.1.5 NWT-Alberta Transboundary Water Bilateral Agreement Negotiations

Transboundary negotiations address Key to Success 1.4 of the Action Plan.

The NWT is the downstream jurisdiction in the Mackenzie River Basin. Our water resources can be influenced by management decisions in British Columbia, Alberta, Saskatchewan and the Yukon.

In response to concerns about the health of the aquatic ecosystems in the basin, including potential effects of industrial and other activities, the Mackenzie River Basin Transboundary Waters Master Agreement (the Master Agreement) was signed by the Governments of Canada, NWT, Yukon, British Columbia, Alberta and Saskatchewan in 1997. This agreement commits all six governments to work towards cooperative management of the water resources of the entire Mackenzie River Basin.

The Master Agreement encourages the governments to develop Bilateral Water Management Agreements between jurisdictions that share waterbodies. To date, only the Yukon-NWT bilateral water agreement has been completed. Negotiations are ongoing between the NWT and Alberta, Alberta and British Columbia, and Alberta and Saskatchewan. Current negotiations between the NWT and Alberta as per the Master Agreement are timely because during the past decade, rapid and extensive development of Alberta's oil sands in the Athabasca region and British Columbia's proposed Site C hydroelectric project have heightened northern concerns about potential downstream impacts of development.

In 2007, the GNWT, Government of Canada and Alberta signed the Alberta-NWT Memorandum of Understanding – Bilateral Water Management Agreement Negotiations. It sets out the principles, schedule, and required background information for negotiating an agreement between the NWT and Alberta. Once the Alberta-NWT bilateral agreement is complete, the NWT plans to negotiate bilateral agreements with British Columbia and Saskatchewan and revisit the agreement with the Yukon.

The Aboriginal Steering Committee, established during the initial phases of the Water Strategy to guide its development and implementation, is regularly updated and asked for input on the transboundary discussions. The Aboriginal Steering Committee provides an important mechanism for information flow between the NWT negotiation team and regional governments.

During the January 2013 workshop, some successes were identified pertaining to current bilateral water agreement negotiations.

Workshop Outcomes - Successes:

- There has been Aboriginal and public engagement since March 2012 to ensure the NWT negotiation team fully understands NWT residents' interests and concerns related to transboundary water resources.

- Aboriginal consultation began in August 2012 to fulfill the commitment in existing land claim agreements to consult on development of positions. Regional workshops were held across the NWT to fulfill consultation obligations and provide results of recent community-based monitoring activities. Consultation with local and regional Aboriginal leadership will continue until a final agreement is signed with Alberta.

2.2 Know and Plan

Know and Plan actions focus on how we monitor and better understand the aquatic ecosystem, including changes in the quality and quantity of water. Keys to Success being completed are related to: water monitoring; research; community involvement in monitoring and research (including community-based monitoring); and source water protection. The work completed to date is discussed along with successes and areas with room for improvement brought forward by water partners during the January 2013 workshop.

Figure 2 below highlights progress on Know and Plan action items covering the period from April 2011 - March 2013.

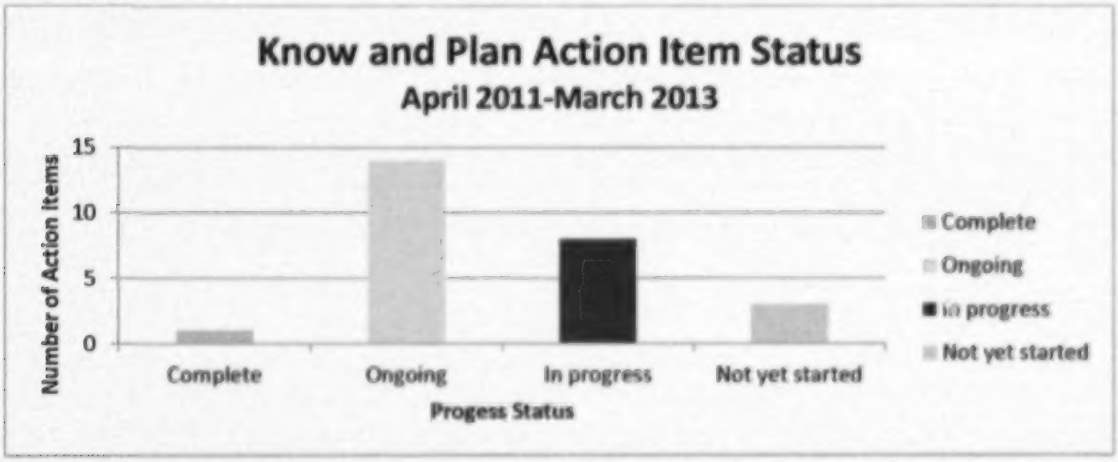

Figure 2: Status of Know and Plan action items since the release of the Action Plan.

2.2.1 Water Monitoring

Water monitoring activities have been, and continue to be, conducted in the NWT by a number of water partners including Aboriginal, federal and territorial governments, communities, industry and other parties. Some of the programs have been long term, going as far back as 60 years, while others are shorter term, offering data that captures snapshots in time. Compiling and reviewing these water monitoring activities addresses action items under Keys to Success 2.1A and 2.1F.

AANDC, Environment Canada, GNWT, and regulatory boards have key water quality or quantity monitoring or management roles in the NWT.

2.2.1.1 Aboriginal Affairs and Northern Development Canada (AANDC)

AANDC is currently the authority responsible for water resources management, and has an important role to play in maintaining the integrity of northern waters. AANDC manages the NWT's inland and offshore water resources through the administration and co-management of the *Northwest Territories Waters Act* and Regulations, the *Mackenzie Valley Resource Management Act* and Regulations, and the *Arctic Waters Pollution Prevention Act*. In Canada, water resources have been transferred to the provincial governments, except for Environment Canada's federal roles and responsibilities under the *Canada Waters Act* and international transboundary agreements. In the NWT, AANDC retains province-like responsibilities until federal-territorial devolution of water-related responsibilities occurs.

AANDC's water monitoring programs include:

- Water quality monitoring on the Yellowknife, Cameron and Marian rivers, in the upper Coppermine and upper Lockhart basins, and on transboundary rivers (Slave, Hay, Liard and Peel rivers). For more information on these programs see www.aadnc-aandc.gc.ca/eng/1100100022933/1100100022934 and for the 2012 *Slave River Water and Suspended Sediment Quality in the Transboundary Reach of the Slave River, NWT* report see www.nwtwaterstewardhip.ca/?q=publications;
- Water quantity monitoring under the NWT hydrometric program, delivered through an agreement with Environment Canada;
- Water quality and quantity monitoring as a condition of water licences held by the contaminants and remediation directorate for the remediation of abandoned mine sites (see www.aadnc-aandc.gc.ca/eng/1100100022939/1100100022940); and,
- Supporting other water partners with their water monitoring initiatives, for example, through NWT Cumulative Impact Monitoring Program projects (see www.aadnc-aandc.gc.ca/eng/1100100027498/1100100027499).

AANDC is developing a water monitoring inventory which documents information from both ongoing and past water monitoring programs. The focus is on water quality and water quantity

monitoring, with select information on permafrost, snow, ice and fish. Once complete, the water monitoring inventory will be available at www.nwtwaterstewardship.ca

2.2.1.2 Environment Canada

Environment Canada collects, processes, publishes and distributes surface water quantity and quality data on a national basis through the authority of the *Canada Water Act*, as well as through formal agreements with AANDC, other government departments and the private sector. These activities include water monitoring at several locations in the NWT, such as transboundary rivers and various national parks.

For real-time water quantity (water level and flow) data from the NWT hydrometric program, go to www.wateroffice.ec.gc.ca/index_e.html and for archived water level and flow data, go to www.wsc.ec.gc.ca/applications/H2O/index-eng.cfm

For information on water quality monitoring and to request water quality data for the NWT, go to www.ec.gc.ca/eaudouce-freshwater/default.asp?lang=En&n=6F77A064-1

2.2.1.3 Government of the Northwest Territories (GNWT)

Aside from ENR, a few GNWT departments conduct water monitoring and related activities. The Department of Health and Social Services (HSS) is responsible for the regulation of drinking water through the *Public Health Act* and oversees regulations for the operation of water treatment plants and drinking water systems. HSS conducts water sampling on drinking water and is responsible for issuing boil water advisories when necessary.

The Department of Municipal and Community Affairs (MACA) provides information on community drinking water and provides a drinking water quality database (see www.maca.gov.nt.ca/?page_id=1659 for more information). MACA also offers training and information for water plant operators, including circuit rider training and operator certification.

The Department of Public Works and Services (PWS) provides communities with technical guidance on water, wastewater and municipal waste disposal. PWS also develops technical standards and guidelines, updates them as appropriate, and carries out inspections and operational reviews of water supply systems. For more information, go to www.pws.gov.nt.ca

ENR and other departments are involved in a number of community-based water monitoring initiatives (see Section 2.2.3 *Community Involvement in Monitoring and Research* and Section 2.2.4 *Source Water Protection*).

2.2.1.4 Regulatory Boards

Regulatory boards regulate the use of land and water through the issuance of water licences and land-use permits. In the NWT five regulatory boards – the NWT Water Board, Mackenzie Valley Land and Water Board, Gwich'in Land and Water Board, Sahtu Land and Water Board and Wek'èezhii Land Water Board – play a key water management role evaluating applications for water licences (to use water or deposit waste) based on evidence collected through a public

review process. These regulatory boards use conditions in water licences to mitigate potential impacts on the aquatic environment.

Water licences issued by regulatory boards generally include water monitoring requirements known as surveillance network programs and aquatic effects monitoring programs. The purpose of these monitoring programs is to determine whether a project is having effects on the aquatic environment and whether mitigation measures are working as anticipated. The regulatory boards may amend the mitigation measures within a water licence based on the results of monitoring programs.

For more information, and to view the data from the water monitoring programs undertaken by water licence holders, see the regulatory boards' public registries at www.glwb.com, www.slwb.com, www.wlwb.ca, www.mvlwb.ca, and www.nwtwb.ca

During the January 2013 workshop, several areas with room for improvement pertaining to long-term monitoring were identified.

Workshop Outcomes - Room for Improvements:

- The most extensive water monitoring (including biological indicators) that has taken place in the NWT is agency-led monitoring (e.g. AANDC, Fisheries and Oceans Canada, and Environment Canada). There have been concerns raised regarding changes to existing environmental legislation and the reduced budgets for some of the agency-led monitoring. It was suggested that NWT water partners need to work together, in spite of some of the recent changes, to secure long-term funding for monitoring.
- There is a need to communicate the results and significance of long-term monitoring to communities and other NWT water partners. Attention also needs to be given to managing and sharing the monitoring data itself, and not solely the resulting reports and conclusions.
- Mapping monitoring and research locations would provide a visual means of highlighting these activities and promote further opportunities between water partners to discuss future priorities with regards to monitoring and research.
- A water monitoring inventory summarizing water quality and quantity monitoring programs in the NWT needs to be finalized.
- Baseline groundwater monitoring data, along with traditional knowledge research, is needed for the Central Mackenzie Valley due to increasing oil and gas development.

2.2.2 Research

Research can improve our understanding of how water and aquatic ecosystems function, provide information about how stressors including climate change and industrial development can impact

water and aquatic ecosystems, and help us shape and adapt water stewardship decisions. Research can be undertaken by communities, governments (Aboriginal, municipal, territorial and federal), non-government organizations, industry, and academics institutions (universities and colleges). Action items under Keys to Success 2.1A, 2.1C, 2.1D and 2.1G pertain to water-related research.

Some of the highlighted partnerships (see Section 2.1.1 *Water Partnerships*) have resulted in research addressing questions important for the North. For a list of past and current research taking place in the NWT, visit the Aurora Research Institute website at www.nwtresearch.com The Aurora Research Institute provides a platform where researchers and communities can meet and have an exchange of information and knowledge. During the January 2013 workshop, research projects were mostly discussed in terms of community involvement in academic research, with both successes and areas with room for improvement as identified below.

Workshop Outcomes - Successes:

- When researchers work directly with communities to develop and design a research project from the outset, it leads to strengthened partnerships and clear research objectives and design. For example, collaborative research between Inuvialuit communities and the University of Victoria has been successful. Community members' contributions were financially compensated and the involved communities took interest in the project. This was a collaborative learning process. To find out more about this project visit http://mapping.uvic.ca/mackenziedelta
- Research undertaken by NWT CIMP regarding landscape changes in the Peel watershed was pointed out as a crucial and important project. This project follows the Pathway approach and provides an example of how to conduct a research project together with a community (see Section 2.2.3.3 *A Watershed Approach to Monitoring Cumulative Impacts of Landscape Change*).

Workshop Outcomes - Room for Improvements:

- There needs to be a combination of different funding sources to better address concerns.
- Large funding sources like Natural Sciences and Engineering Research Council of Canada (NSERC) should be better informed about the research priorities from a northern perspective.
- Some community members do not use the internet so other communication approaches must be taken, such as print newsletters, to ensure community involvement.
- There are a number of research projects underway. There is a need to facilitate ongoing discussions between researchers, communities and other water partners to ensure relevant information to the North is being studied.

2.2.3 Community Involvement in Monitoring and Research

Community involvement in monitoring and research enables communities to identify priorities, unanswered questions and concerns, and to influence what is monitored or studied in the local watershed. As northerners, we have unique needs and concerns that should be addressed in a water monitoring context. As such, we need unique and innovative monitoring programs that are northern focused, based on traditional knowledge and science, and addresses northern concerns.

Community-based monitoring progress contributes to several Keys to Success under 2.2 of the Action Plan. Developing these programs can lead to long-term baseline data showing whether and how water and the aquatic environment may be changing in the NWT. The focus of what to monitor should be adaptable to the community's needs while using standardized approaches for sampling and analyzing data.

Progress on initiatives and programs that support community-based monitoring, relevant technical support, and progress on specific community-based initiatives are discussed below.

2.2.3.1 Broad NWT or National Initiatives and Programs that Support Community-based Monitoring

NWT water partners offer community-based monitoring support and programs at national, territorial and regional scales. Initiatives to help get communities involved in community-based monitoring include:

- Helping communities decide on priorities for program design
- Assisting with access to funding for capacity building
- Assisting with implementation of the planned program

A list of the main community-based monitoring programs and initiatives in the NWT is included below. For more information go to our website at www.nwtwaterstewardship.ca

AANDC Water Resources Community-based Monitoring Support

AANDC is the authority responsible for water resources management in the NWT and regularly undertakes water monitoring. AANDC's Water Resources Division helps communities by providing support in developing and implementing community-based monitoring initiatives.

AANDC's NWT Cumulative Impact Monitoring Program

AANDC's NWT Cumulative Impact Monitoring Program (NWT CIMP) aims to look at how "all uses of land and water, and deposit of waste, affect the environment of the NWT now and in the future". NWT CIMP has existed since 1999 as a statutory requirement supporting informed resource management decisions throughout the NWT. The monitoring of cumulative impacts is a constitutional obligation in the Sahtu, Gwich'in and Tłı̨chǫ comprehensive land claim agreement and a statutory requirement of Part 6 of the *Mackenzie Valley Resource Management Act.*

NWT CIMP follows a community-based approach, meaning that communities are involved throughout the program: in the design, monitoring, analysis/interpretation and reporting of

traditional knowledge or science-based activities. The information collected through NWT CIMP is important and relevant to northerners; therefore the program is largely guided by the expertise and efforts of northern residents.

Work is underway to develop water quality metadata reporting standards to ensure the collection of key information is standardized. To date, permafrost and vegetation monitoring protocols have been developed.

Recommendations from the NWT CIMP Working Group guide the design and implementation of the program. The Working Group includes representatives from Aboriginal organizations, territorial and federal governments, co-management boards and industry. All information generated by NWT CIMP can be found in the NWT Discovery Portal (see Section 2.1.2 *Information Management*).

AANDC Northern Contaminants Program
AANDC's Northern Contaminants Program works to reduce and, wherever possible, eliminate contaminants in traditionally harvested foods, while providing information that assists individuals and communities in making informed decisions about their food use.

The program was established in 1991 in response to concerns about human exposure to elevated levels of contaminants in wildlife species that are important to the traditional diets of northern Aboriginal peoples.

Aboriginal Aquatic Resources and Oceans Management Program (AAROM)
The Aboriginal Aquatic Resources and Oceans Management program is intended to build capacity for aquatic resource management in regions where Fisheries and Oceans Canada manages fisheries (i.e., unsettled land claim regions). For example, in the NWT, coordinators have been hired for the Dehcho First Nations, Akaitcho Territory Government and Northwest Territory Metis Nation.

GNWT Environment and Natural Resources Community-based Monitoring Support
Implementation of the Action Plan supports NWT communities to become more involved in water stewardship activities like monitoring and research. The GNWT provides a range of information about monitoring parameters, funding resources, and equipment for community-based monitoring (See *Technical Support for Community-based Monitoring Initiatives* below). The GNWT also provides support for development and implementation of monitoring programs, capacity building and partnership development.

2.2.3.2 Technical support for Community-based Monitoring Initiatives

This section describes progress to date on an approach to monitoring, funding mechanisms, and technical support such as tools and equipment available to NWT communities. Outcomes from the January 2013 workshop are also identified.

Mechanisms and tools for supporting community-based monitoring initiatives will help achieve action items under Keys to Success 2.1 and 2.2.

The Pathway to Better Monitoring in Canada's North

The NWT Cumulative Impact Monitoring Program (NWT CIMP) supports and conducts monitoring programs that address land and water issues of importance to Northerners. Guided by a northern-based Working Group, NWT CIMP is promoting a partnership approach to monitoring through its *Pathway to Better Monitoring in Canada's North* (the Pathway).

Challenges can arise when an organization tries to independently run a monitoring program that lacks a shared purpose and a clear plan from start to finish. Other challenges include agreeing on what to monitor, deciding "who does what, when", and how best to use traditional knowledge. NWT CIMP created the Pathway to address such challenges. Every step of the Pathway is important. When the steps are followed one after the other, a monitoring program will likely benefit from:

- Strengthened partnerships
- Clarified roles and responsibilities
- More effective study design
- Improved information sharing
- More involvement of Northerners
- Better balance of scientific and traditional knowledge
- Increased understanding of impacts and connections
- Enhanced relevance for Northerners
- Wider awareness and usefulness of results

The following steps are identified as part of the Pathway approach:

Step 1. Define a purpose - Why are we monitoring?

Step 2. Identify key connections - How do things interact and/or connect, and what should we track?

Step 3. Review current information - What is already known?

Step 4. Ask the right questions - What needs to be answered?

Step 5. Make a plan - How will we find answers?

Step 6. Collect information - How do we gather the observations and data?

Step 7. Analyze information - How can we turn observations into useful knowledge?

Step 8. Report findings - How should we tell our story?

Step 9. Adapt to changes - What has changed? Should we adjust our monitoring program?

To access the Pathway booklet, go to http://sdw.enr.gov.nt.ca/nwtdp_upload/CIMP%20Pathway%20booklet.pdf or email NWT CIMP at cimp@aandc-aadnc.gc.ca

To read about an example of how the Pathway can be applied, see *Slave River and Delta Partnership* and *A Watershed Approach to Monitoring Cumulative Impacts of Landscape Change* under *Specific Community-based Initiatives* in Section 2.2.3.3.

During the January 2013 workshop the following success related to the Pathway was identified.

Workshop Outcomes - Success:

- The Pathway provides beneficial advice for how monitoring and research should be undertaken and how partnerships with the communities should be built. This approach needs to be promoted and applied.

Funding

Implementing water stewardship programs can be costly. For many communities, additional funding is required to bring water monitoring related initiatives to life – but finding funding opportunities and writing proposals can be challenging. There are many opportunities for funding, from philanthropic foundations to government agencies to non-governmental organizations.

To help with this challenge, GNWT- ENR produced a community funding calendar (2012) which lists all the possible funding opportunities open to communities and environmental non-profit organizations, including annual proposal submission deadlines. To learn more, go to http://nwtwaterstewardship.enr.gov.nt.ca/?q=publications#Funding

During the January 2013 workshop areas with room for improvement regarding funding were identified.

Workshop Outcomes - Room for Improvements:

- Training community members to carry out monitoring and research activities is a necessity. There needs to be a plan and attached funding to invest in the regions and build the capacity.
- Community-based monitoring faces challenges when it is financed on a one-year basis and does not have the security of multi-year funding. It is challenging for communities to maintain their monitoring priorities while trying to secure financial funding, as funding criteria can be restrictive.

Equipment for Documenting Water-related Change
GNWT-ENR houses equipment for communities and land users to help document environmental changes happening in their regions. Equipment packages are available for loan to all 33 NWT communities. The information gathered by using the equipment will help document changes occurring throughout the NWT. Equipment includes water quality monitoring instruments as well as global position systems (GPS) and cameras. The equipment was purchased jointly by GNWT-ENR, AANDC and Fisheries and Oceans Canada.

In 2011, training was offered to representatives from regional Aboriginal governments to learn how to use the water quality equipment. The University of Alberta collaborated with GNWT-ENR to develop plain language instructions in both video and written format for the equipment. These instructions along with sample data collection sheets are available on the GNWT-ENR website at www.nwtwaterstewardship.ca/?q=monitoring_resources

To find out more about this program, or to access this equipment, please contact GNWT-ENR's Land and Water Division at (867) 920-6339, or go to
http://www.nwtwaterstewardship.ca/?q=community_based_monitoring

During the January 2013 workshop a success related to monitoring equipment was identified.

Workshop Outcomes - Success:

- The Aboriginal Aquatic Resource and Oceans Management program in the Dehcho region has addressed community concerns through its monitoring programs. Water quality equipment was made available in the Dehcho in 2011-2012. This strengthened ongoing monitoring efforts by adding capacity and generating information.

Equipment Deployment in support of Community-based Monitoring
As part of the commitment to the ongoing monitoring of the freshwaters of the NWT, GNWT-ENR deployed monitoring equipment at various locations throughout the NWT in 2011 and 2012. The deployed water quality monitoring equipment can measure polycyclic aromatic hydrocarbons (PAH), dissolved metals, chlorophyll, conductivity, dissolved oxygen, oxidation-reduction potential, pH, turbidity and water temperature. Grab samples of water are also collected at the different sites and are analyzed for over 70 parameters.

Water quality data is currently being analyzed. Once complete, the results will be presented to communities and be available at www.nwtwaterstewardship.ca

2.2.3.3 Specific NWT Community-based Monitoring Initiatives

Several ongoing community-based monitoring initiatives are highlighted below along with new and up-coming initiatives. Some of these initiatives stem directly from the Water Strategy and Action Plan while others began earlier or are indirectly related (the mandate meets Water Strategy goals, but the project was developed to achieve the goals of other organizations). They

all support the implementation of the Water Strategy by demonstrating successful approaches and collaborations for community-based monitoring.

Community-based monitoring initiatives address numerous Keys to Success including 1.1E, 1.1F, 1.1G, 1.1H, 1.2H, 2.1A-I, 2.2A, and 2.2B.

Slave River and Delta Partnership

The Slave River and Delta Partnership (SRDP) was formed in 2010 (see Figure 2 and Appendix 2 and for full membership list) as a result of unhealthy fish being caught in the region during the fall of 2010, and concerns about upstream development. The development of the SRDP and its initiatives tested the steps of the CIMP Pathway approach (see Section 2.2.3.2 *Technical Support for Community-based Monitoring Initiatives*). The SRDP developed a made-in-the-north adaptable framework for community-based monitoring.

Figure 3: The make-up of the Slave River and Delta Partnership.

The framework recognizes the importance of, and advocates for the use of traditional, local and western scientific knowledge as complementary ways of understanding the ecosystem. Communities involved have control during all phases of the project over how traditional knowledge may be included in the design of the monitoring and subsequent reporting.

This framework includes three stages:

1) Developing partnerships and identifying community concerns

Communities identify water-related issues and concerns through conference calls, workshops and community meetings. A community-driven monitoring project is identified based on what the community wants to monitor, and the level of community participation is then determined.

Within SRDP, three main questions were identified by community members to drive future community-based monitoring activities:

- Is the water safe to drink?
- Are the fish safe to eat?
- Are ecosystems healthy?

2) *Development of a State of the Knowledge Report, Vulnerability Assessment and Completion of a Prioritization Exercise*

A *state of the knowledge report* compiles all of the past and current research and monitoring information available for a watershed, using the best available traditional, local and western scientific knowledge.

Key areas addressed by the SRDP include: hydrology and sediment load, water quality, sediment quality, fish/insect/benthic communities (including fish population and health), wildlife, vegetation, air quality and climate.

The key knowledge gaps identified were:

- Studies on fish communities were dated and there was limited information on fish behaviour and habitat; therefore, more work on fish dynamics is needed.
- Limited information was available on insects and benthic communities, aquatic birds, mink and otter, air and climate.
- Research and information on amphibians, moose, vegetation and some aquatic furbearers is available, but further work is required, particularly in respect to new questions raised by community members resulting from observed changes.

Based on the information from the state of the knowledge report, information gaps and vulnerabilities are identified (*vulnerability assessment*). Research and monitoring activities to address information gaps in vulnerable areas are identified and prioritized for future actions.

The key priorities for immediate research and monitoring that were identified are:

- Fish health and contaminants
- Water quantity and flow
- Furbearer population and health

3) *Action and Implementation of Monitoring to Address Key Priorities*

The third phase of the process involves carrying out research and monitoring in core vulnerability areas identified by the partners involved in the process. First, the group needs to identify and secure funding for activities through a variety of sources, including in-kind support, foundation grants and research partnerships with academic institutions. This funding is used to implement research and monitoring action.

Information from research and monitoring is analyzed and reviewed to identify new gaps and set new priorities for coming years.

In order to address the information gap about fish health and contaminants, one of the first SRDP's research projects aimed to investigate contaminant levels in traditionally consumed fish species (including pickerel, jackfish, loche, whitefish and goldeye).

To address the concern of increasing contaminants concentrations in sediment loads in the Slave River Delta, the SRDP worked with partners from Wilfrid Laurier University and the University of Waterloo to conduct a sediment core analysis to examine changes in metal and contaminant concentrations over time.

This community-based monitoring framework has been applied by other NWT communities (see *Community-based monitoring initiatives in Fort Good Hope and Sambaa K'e (Trout Lake)*) and is a framework that can support community-based initiatives across the NWT.

For more information about the SRDP, the community-based monitoring framework, and ongoing initiatives, email nwtwaterstrategy@gov.nt.ca, call (867) 920 6339, or visit www.nwtwaterstewardship.ca

Community-based monitoring initiatives in Fort Good Hope and Sambaa K'e (Trout Lake)
The community of Fort Good Hope raised concerns about human health and the potential connection to water and upstream development. To help address these concerns, GNWT-ENR staff collaborated with community members from Norman Wells and Fort Good Hope to measure water quality. During the summer of 2012, water quality monitoring equipment was deployed at five sites along the Mackenzie River (starting upstream of Norman Wells through to Fort Good Hope), as well as at a sixth site in Fort Good Hope's drinking water reservoir.

During this time, GNWT-ENR staff met with community members and Dehcho Aboriginal Aquatic Resources and Oceans Management program staff in Sambaa K'e to work towards addressing community concerns related to water. As with the monitoring undertaken in Fort Good Hope, GNWT-ENR staff worked with community members from Sambaa K'e to deploy water quality monitoring equipment. To address some immediate concerns in the community,

water quality was measured in Trout Lake, Island River, and in the drinking water reservoir for the community of Sambaa K'e.

GNWT-ENR will continue to work with K'asho Got'ine Community Council in Fort Good Hope and Sambaa K'e Dene Band in Trout Lake. Both communities are in the early stages of developing state of knowledge reports and vulnerability assessments to prioritize community research and monitoring needs. Both projects were partially funded by the NWT Cumulative Impact Monitoring Program.

Aboriginal Aquatic Resources and Oceans Management Program Community-based Monitoring Activities

Water quality, fish biology and habitat monitoring funded by Fisheries and Oceans Canada's Aboriginal Aquatic Resources and Oceans Management Program (AAROM) is underway in unsettled land claim areas in the NWT. The Dehcho AAROM program has initiated community-based monitoring with: Sambaa K'e Dene Band (Trout Lake), Deh Gah Gotie Dene Band (Fort Providence), Liidlii Kue First Nation (Fort Simpson), Pehdezeh Ke First Nation (Wrigley), Nahanni Butte Dene Band, Ka'agee Tu First Nation (Kakisa), Katlodeche First Nation (Hay River), West Point First Nation (Hay River), and Jean Marie River First Nation. The program has provided boats for use in aquatic monitoring activities in the region. Dehcho AAROM community monitors worked with GNWT-ENR to deploy and retrieve water quality equipment used for community-based monitoring. For more information on the Dehcho AAROM program see www.dehcho.org/aarom.htm

The Akaitcho AAROM program has initiated community-based monitoring with the Yellowknives Dene First Nation, Deninu Kue First Nation (Fort Resolution) and Lutsel K'e Dene First Nation. The Northwest Territory Metis Nation AAROM program is currently building partnerships with the Dehcho and Akaitcho AAROM programs and will begin monitoring this year. Several community-based AAROM program projects in the NWT have partnered with other programs such as NWT CIMP and the Northern Contaminants Program. For information about the AAROM program see www.dfo-mpo.gc.ca/fm-gp/aboriginal-autochtones/aarom-pagrao/index-eng.htm

Tłı̨chǫ Aquatic Ecosystem Monitoring Project

The purpose of the Tłı̨chǫ Aquatic Ecosystem Monitoring Project is to develop and implement a monitoring program that meets the needs of the Tłı̨chǫ communities. The Project will determine how and if fish health, water and sediment quality is changing over time and whether fish and water remain safe to consume. This community-driven project started in 2010 that is a collaboration between the Wek'èezhii Renewable Resources Board, the Tłı̨chǫ Government and the Wek'èezhii Land and Water Board. Sampling conducted for this monitoring project is based on both Tłı̨chǫ and western scientific knowledge.

In 2012, the Tłı̨chǫ Aquatic Ecosystem Monitoring Project ran a fish camp off an island near Wekweètì. In the previous two years, the project focused on Marian and Russell Lakes near Behchokǫ̀. The project brings together Tłı̨chǫ youth, elders, traditional knowledge researchers, and scientists to share knowledge and ways to assess the health of fish and their habitat.

To learn more, go to www.wrrb.ca/content/aquatic-ecosystem-monitoring-project

Environmental Change and Human Development in the Tathlina Watershed
The Tathlina Lake area is a culturally and economically significant area for the Ka'a'gee Tu First Nation (KTFN). KTFN band members and their ancestors have lived, hunted, trapped and fished in the area for thousands of years. The lake supports a small commercial fishery, which employs Ka'a'gee Tu First Nation members and contributes significantly to the economy of the community. The area is also downstream from the Cameron Hills, the site of an existing oil and gas production field. Multiple resource pressures and environmental change in the region have led the KTFN to question the cumulative effects of these influences on the current and future health of the aquatic system of the Tathlina watershed.

This multidisciplinary research project is coordinated by the KTFN and NWT CIMP, involving the community, universities, and government. The primary goal of the program is to understand the current health of the aquatic system in the Tathlina watershed and how the system has changed over time. Understanding the drivers of change in the aquatic system requires the determination of individual influences on the system, including the effect of climate change, upstream development, fire history, commercial fishing and of their cumulative effects.

Information generated from this program is directly relevant to northern decision makers. Understanding the drivers of fluctuations in walleye stocks in Tathlina Lake will help Fisheries and Oceans Canada and the community establish sustainable commercial fishing quotas for Tathlina Lake. Information on the influence of upstream oil and gas development will help inform future decision making related to oil and gas development in the area. Researchers involved in this program are in communication with regulatory authorities regarding the best methods for integrating research results into the regulatory process.

A Watershed Approach to Monitoring Cumulative Impacts of Landscape Change
Since 2011, NWT CIMP has funded a multidisciplinary project investigating the remarkable changes impacting the landscape and rivers of the Peel Plateau in northwestern NWT. The Peel Plateau extends along the eastern slopes of the Richardson and Mackenzie Mountains and represents one of the most rapidly changing landscapes in Canada. This region is of cultural and traditional importance to the Gwich'in and Inuvialuit, and it is of ecological and infrastructure (e.g. for transportation or industrial purposes) significance. A collaborative program among governments, academic researchers and the Tetlit Gwich'in was initiated in response to community concerns and scientific interest related to the discovery of massive areas of landscape collapse termed "mega slumps". These disturbances have created crater like scars up to 50

hectares in area and debris flows of up to several kilometers in length, which have infilled numerous stream valleys. Terrain mapping indicates that hundreds of streams are impacted by these disturbances which are anticipated to increase in size and abundance with climate warming.

Preliminary results show that the significant impacts of mega slumps on the ecology of streams, far outweigh those impacts resulting from local human-based activities. Forty years of Peel River water quality data shows that the chemistry of this major river has been significantly altered as a result of thawing permafrost. Sediment cores from affected lakes have been collected to determine how the impacted conditions we are seeing today compare to conditions in the past. Remote sensing is being used to monitor and map the distribution of mega slumps and other landscape disturbances.

By working closely with the community, local observers have provided real-time observations of environmental change, a longer-term perspective on regional environmental conditions and important guidance on the design and implementation of field studies. Linkages between the project team, local priority setting initiatives, infrastructure planners, and regulators have allowed the project team to fine-tune project details to continue to ask the "right" questions. It has also improved the flow of information between project partners.

2.2.4 Source Water Protection

An important aspect of water stewardship is protecting and maintaining water for the health of people and the environment. Source water protection means protecting the source of drinking water for communities. This is part of a multi-barrier approach to drinking water in the NWT, used to ensure that communities have safe, clean, drinking water. Source water protection activities fall under Water Strategy component *Know and Plan* and address Key to Success 2.2B.

Source water protection initiatives are an important part of the Water Strategy, these initiatives were ongoing before the development of the Water Strategy and the Action Plan. The tragedy in Walkerton, Ontario in 2000, where lives were lost due to unsafe drinking water, highlighted the importance of source water protection and a multi-barrier approach to safe drinking water in Canada. As part of source water protection, the GNWT developed and released *Managing Drinking Water Quality in the Northwest Territories: A Preventative Framework and Strategy* in 2005. This report was developed through the GNWT Interdepartmental Water Strategy and Framework. This report outlines the NWT's multi-barrier approach to protecting drinking water and water for the environment through focusing on three key goals:

- Keeping NWT water clean
- Making water safe to drink
- Proving water is safe to drink

2.2.4.1 Source Water Protection Assessment and Planning

GNWT-ENR collaborated with the University of Saskatchewan to develop a made-in-the-north guidance documents for community source water planning called *Source Water Assessment and Planning* (SWAP). The guide and a community workbook are plain language documents outlining a straight forward process to guide communities through the development of a source water protection plan.

The SWAP documents were developed based on several community meetings, interviews with elders, and the different challenges and opportunities with different treatment facilities in the NWT. In 2012, workshops were organized to build community capacity and show how to use the SWAP documents.

A 2013 water calendar (produced by GNWT-ENR) outlines the steps communities can follow to build their source water protection plan using the SWAP guidance document.

GNWT-ENR has developed a series of community catchment maps identifying where community source waters are located, and the broader watershed where they are found. These maps are designed to help identify potential threats to, and opportunities for, maintaining and protecting community drinking water sources.

For more information about source water protection initiatives, the SWAP documents, and the 2013 water calendar, please see www.nwtwaterstewardship.ca/?q=swprotection

2.3 Use Responsibly

Use Responsibly actions focus on ensuring the necessary tools are in place to make informed decisions about water stewardship. Activities involving the use of water or deposit of waste in the NWT are regulated to make sure these activities do not harm the environment or people. The *Mackenzie Valley Resource Management Act*, the *Northwest Territories Waters Act* and comprehensive land claim agreements have established regulatory boards (made up of representatives from Aboriginal, territorial and federal governments) to authorize activities that use land and water.

To make sure water is used responsibly a number of Keys to Success related to policies, procedures and guidelines, including municipal waste water effluent and municipal water licence compliance initiatives, are being completed. The work completed to date is discussed below along with successes and areas with room for improvement brought forward by water partners during the January 2013 workshop.

Figure 4 below highlights progress on Use Responsibly action items covering the period from April 2011 - March 2013.

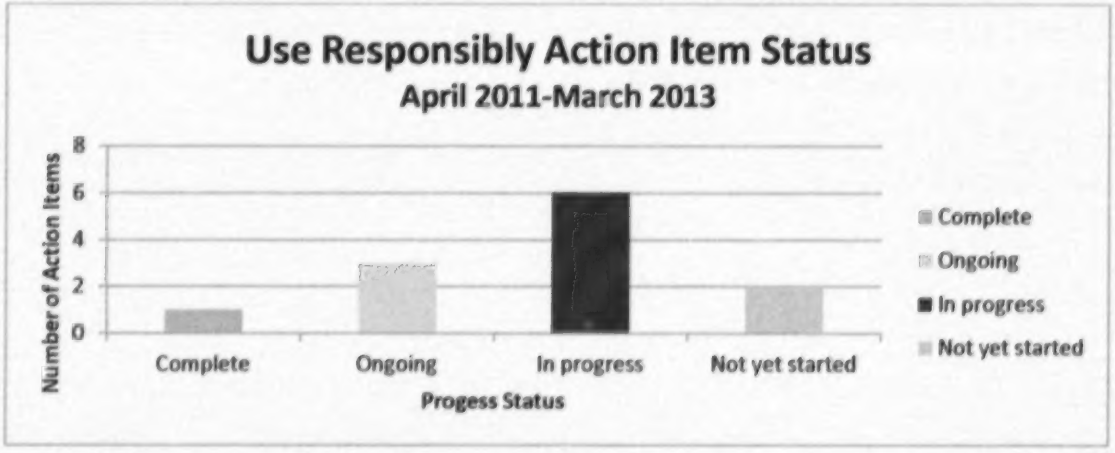

Figure 4: Status of Use Responsibly action items since the release of the Action Plan.

2.3.1 Policy, Procedures and Guidelines

The development, review and implementation of water-related regulatory procedures and guidelines support sound water stewardship. This work addresses specific action items under Key to Success 3.1B in the Action Plan.

In 2011, the *Water and Effluent Quality Management Policy* was released by the land and water boards of the Mackenzie Valley[3]. The policy describes the approach to managing the deposit of waste to the receiving environment (such as a lake), through enforceable water licence terms and conditions, such that the amount of waste deposited is minimized and water quality is maintained at a level that allows for current and future water uses. Once complete, the supporting guidelines for the *Water and Effluent Quality Management Policy* will outline key guiding principles on water and effluent quality management. The policy is currently being applied and a working group is in place to develop the supporting guidelines.

AANDC and the Land and Water Boards of the Mackenzie Valley are in the final stage of approving the joint *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the NWT*. These guidelines set out clear expectations for proponents submitting closure and reclamation plans as a condition of their water licences.

[3] The Land and Water Boards of the Mackenzie Valley include the Gwich'in Land and Water Board, the Sahtu Land and Water Board, the Wek'èezhìi Land and Water Board and the Mackenzie Valley Land and Water Board.

During the January 2013 workshop an area with room for improvement about the Water and Effluent Quality Management Policy was identified.

Workshop Outcomes – Room for Improvement:

- Academia, industry and communities can all play an important role in developing the guidelines for the Water and Effluent Quality Management Policy.

2.3.2 National Strategy to Manage Municipal Wastewater Effluent

Wastewater from households and other sources within communities can contain a broad range of substances. The GNWT and the Government of Canada participate in implementing the *Canada-wide Strategy for the Management of Municipal Wastewater Effluent* to reduce risks to humans and the environment and improve how this effluent is managed in Canada. The Governments of NWT, Nunavut, Quebec and Newfoundland and Labrador work with Environment Canada and AANDC to address issues specific to the North. This work addresses Key to Success 3.1C. For more information, go to www.ccme.ca/ourwork/water.html?category_id=81

2.3.3 Municipal Water Licence Compliance Initiatives

Communities and other water partners have identified challenges related to preparing municipal water licence applications and complying with water licence requirements. To begin to address these challenges, training has been provided to help develop water licence applications and fulfill existing licence requirements such as compliance monitoring of effluent or wastewater. This work addresses Key to Success 3.3A.

To date the training has been led by a variety of water partners, including NWT Water Board, Wek'èezhii Land and Water Board, Ecology North and AANDC. Ongoing outreach and engagement continues to be very important. For example, staff at the Wek'èezhii Land and Water Board has been working collaboratively with the Tłı̨chǫ communities and other government agencies to build local capacity for water quality monitoring, focusing on the monitoring requirements of water licences. This includes sampling procedures, record keeping, reporting, communication and interpreting results.

As a result of this collaboration, more water quality monitoring was undertaken by Tłı̨chǫ communities. These communities now have the capacity to carry out their own monitoring. This capacity-building activity can benefit other monitoring programs and water stewardship activities, such as source water protection.

During the January 2013 workshop an area with room for improvement regarding compliance monitoring was identified.

Workshop Outcomes - Room for Improvement:

- Linkages between the Water Strategy and the regulatory boards could be stronger by collaborating on educational tools. For example, the differences between Aquatic Effects Monitoring Programs, Surveillance Network Programs and monitoring to support environmental assessment must be explained in plain language.

2.4 Check Our Progress

Check our Progress actions address how our work is reviewed to ensure progress is made on achieving the vision of the Water Strategy. The two main areas under this component of the Action Plan are routine checks (Key to Success 4.1) and external review (formal audit, Key to Success 4.2).

Figure 5 below highlights progress on Check our Progress action items covering the period from April 2011 - March 2013.

Figure 5: Status of Check our Progress action items since the release of the Action Plan.

2.4.1 Routine Checks

This Progress Report is part of the routine check to make sure water partners assess the implementation of the Water Strategy and Action Plan, agree on priorities, and set strategic directions for future activities. Currently, the routine checks lack a formal evaluation framework. An evaluation framework is important, and will be part of the future progress reporting.

For this progress report, the Keys to Success have been reviewed and categorized to provide a status update on the implementation of the action items.

2.4.1.1 Action Item Status

The Action Plan outlines 38 Keys to Success which are comprised of 142 action items. AANDC and GNWT-ENR have been tracking the progress of the action items up to March 2013, including ongoing action items. To date seven action items have been completed, 52 action items are ongoing, 45 action items are in progress and 14 action items are not yet started (see Figure 6). The categories used to report on the status of action items are defined as follows:

- *Complete* - A tangible result, such as a report, is available to address the action item and no further follow up is required.
- *Ongoing* - A tangible result, such as a report/monitoring program/undertaking, has been achieved; however, ongoing work is needed to ensure the action item is completed in a comprehensive manner. Some action items do not have a specific deliverable date and will continue to be ongoing.
- *In progress* - Work is underway on the action item; however, tangible results are not yet available.
- *Not yet started* - Work on the action item has not been initiated to date as other action items need to be completed first.

Figure 6: Status of action items since the release of the Action Plan covering the period from April 2011-March 2013.

Specific examples of how action items are tracked are presented in Appendix 3. For further details on the status of specific action items, please contact us at nwtwaterstrategy@gov.nt.ca

2.4.2 External Review

An external review of the Action Plan implementation status will take place every five years. The outcomes of this review will feed into future versions of the Action Plan. An external review is planned for 2015. Water partners are taking steps towards forming an evaluation team that will develop a review process and criteria.

3.0 Strengthening Our Progress and Future Priorities

To continue to successfully implement the Water Strategy, strengthen our progress, and achieve the action items identified in the Action Plan, water partners can build on successes and learn from challenges.

Checking our progress on a regular basis, through workshops and progress reports, helps ensure that water stewardship initiatives are working and that water partners continue to support the vision of the Water Strategy.

Over the past two years, water partners have had many successes. The continuing priorities of the lead agencies for the majority of the Keys to Success toward implementing the Water Strategy are:

- GNWT-ENR's primary areas of focus: transboundary water agreement negotiations, community-based monitoring, source water protection, and communication and engagement with water partners and the public.
- AANDC's primary areas of focus: transboundary water agreement negotiations; community-based monitoring that supports decision-makers, such as projects funded by the NWT Cumulative Impact Monitoring Program; continuation of existing water quality and quantity monitoring programs; development of technical guidance documents to regulatory boards; and communication and engagement with water partners and the public.
- Regulatory boards' primary areas of focus: developing regulatory guidance and helping build community capacity for municipal water licence compliance monitoring.

These priorities reflect many water stewardship activities in the NWT. Progress has been made on several other significant areas to implement as many Keys to Success as possible, including information management, traditional knowledge, and developing and strengthening partnerships.

During the January 2013 Water Strategy implementation workshop, key areas of focus were identified to collectively "strengthen our progress" in implementing the Water Strategy and Action Plan in the future, and build on successes to date. These include:

1. ***Partnerships:*** Maintaining existing partnerships, and forming new partnerships, is important to ensure continued implementation of the Water Strategy. Partnerships should be expanded where possible but not to the extent that they could negatively affect current

collaborations and projects. All water partners have limited resources (time, staff and funding) and cannot be over-engaged in partnerships.

2. ***Communication and engagement with NWT water partners and residents***: Regular updates between annual workshops are necessary for communicating with and engaging water partners and residents. The NWT water stewardship website will provide the primary venue for regular updates. Other communication tools will be used to keep NWT water partners informed about our progress.

   Finalizing and implementing a plan that includes communication, engagement and public education activities is also important for moving forward. It will ensure that water stewardship progress updates are shared with a wide audience, that water partners are fully engaged, and that public education opportunities are maximized.

3. ***Community-based monitoring***: Several successful community-based monitoring programs are underway. Workshop participants have made it clear that community-based monitoring is a priority throughout the NWT to ensure clean and safe drinking water and healthy aquatic ecosystems. Strong partnerships are the basis of effective, inclusive and collaborative community-based monitoring. Water partners need to continue to work together to overcome identified challenges such as securing ongoing funding.

4. ***Transboundary negotiations***: Intensive work continues toward the development of a bilateral agreement on transboundary water between Canada, the GNWT and Alberta to meet the vision of the Water Strategy. Water partners have reiterated the importance and necessity of ongoing Aboriginal and public engagement to ensure the negotiation team fully understands NWT residents' interests and concerns related to transboundary water resources.

This Progress Report will help inform future Water Strategy initiatives. It captures successes, lessons learned, areas where more work is required, and opportunities for further engagement. The vision of the Water Strategy – *The waters of the NWT will remain clean, abundant and productive for all time* – remains at the forefront of implementation efforts. Residents of the NWT want access to safe, clean and plentiful drinking water at all times, and aquatic ecosystems to sustain their communities, culture and economies. These are goals of the implementation of the Water Strategy and Action Plan. The Action Plan is a living document that will continue to advance the intent of the Water Strategy and ensure these key goals are met. Future reporting will document ongoing efforts to safeguard the water of the NWT.

Appendices

Appendix 1: NWT Water Partners

- Aboriginal Affairs and Northern Development Canada
- Akaitcho NWT Government
- Aurora Research Institute
- Canadian Parks and Wilderness Society
- Canadian Association of Petroleum Producers
- Dehcho First Nations
- Fisheries and Oceans Canada
- Ducks Unlimited Canada
- Ecology North
- Environment and Natural Resources (GNWT)
- Environment Canada
- Environmental Impact Screening Committee Inuvialuit
- Department of Executive (GNWT)
- Gwich'in Land and Water Board
- Gwich'in Renewable Resources Board
- Gwich'in Tribal Council
- Health and Social Services (GNWT)
- Industry, Tourism and Investment (GNWT)
- Inuvialuit Regional Corporation
- Inuvialuit Game Council
- Local Government Administrators of Northwest Territories (LGANT)
- Mackenzie River Basin Board
- Mackenzie Valley Environmental Impact Review Board
- Mackenzie Valley Land and Water Board
- Municipal and Community Affairs (GNWT)
- North Slave Métis Alliance
- NWT Association of Communities (NWTAC)
- NWT Communities
- NWT Hydro Corporation
- NWT Municipal Governments
- NWT and Nunavut Chamber of Mines
- NWT Protected Areas Strategy
- NWT Water Board
- Northwest Territory Métis Nation

- Parks Canada
- Pembina Institute
- Sahtu Land and Water Board
- Sahtu Renewable Resources Board
- Sahtu Secretariat Incorporated
- Tłı̨chǫ Government
- Wek'èezhii Land and Water Board
- Wek'èezhii Renewable Resources Board

Appendix 2: Slave River and Delta Partnership Membership List

- Smith Landing First Nation
- Salt River First Nation
- Deninu K'ue First Nation
- NWT Metis Nation
- Fort Resolution Metis Council
- Fort Smith Metis Council
- Hamlet of Fort Resolution
- Town of Fort Smith
- Aurora Research Institute
- Aurora College
- Wilfrid Laurier University
- University of Waterloo
- University of Saskatchewan
- Government of the Northwest Territories (GNWT), Environment and Natural Resources (ENR)
- GNWT, Municipal and Community Affairs
- Aboriginal Affairs and Northern Development Canada (AANDC), Water Resources Division
- Parks Canada
- Fisheries and Oceans Canada

Appendix 3: Action Item Progress Tracking Table Examples

Key	Action Item	Deliverable Date	Lead Agency	Update	Progress Status as of March 2013
1.2 D - 2	Provide training on NWT Discovery Portal use and access protocols.	April 2012	AANDC	GNWT-Geomatics is producing a training video and NWT CIMP and Geomatics staff can provide training.	Ongoing
1.3 A - 1	Identify water partners and maintain membership in the partners' communication working group and Aboriginal Steering Committee.	April 2011 and Bi-annually	GNWT-ENR/ AANDC	GNWT-ENR, AANDC, Aurora Research Institute and Aurora College are members of communications working group.	Ongoing
1.3 B - 1	Coordinate and develop activities to celebrate Canada Water Week and World Water Day.	April 2011 and Annually	GNWT-ENR/ AANDC	Activities in several communities in 2012 and 2013, including developing and implementing a water curriculum, photo and art contests, and public presentations.	Ongoing
1.4 A - 2	Collect and share all Slave River background information in support of negotiations and develop a common report for relevant jurisdictions.	September 2011 and Ongoing	GNWT-ENR/ AANDC	An AANDC report titled *Water and Suspended Sediment Quality of the Transboundary Reach of the Slave River, NWT* (2012) is available online at www.nwtwaterstewardship.ca/?q=publications	Complete
1.4 A - 3	Determine transboundary negotiating team and support processes, including Aboriginal participation and engagement.	September 2011	GNWT-ENR/ AANDC	Information available online at www.nwtwaterstewardship.ca/?q=transboundary	Complete
1.4 A - 4	Develop NWT interests, mandates and options to inform transboundary negotiations in partnership with Aboriginal governments.	December 2011	GNWT-ENR/ AANDC	In progress. A draft agreement is expected by fall 2013 and a final agreement by the end of 2013.	In progress
3.3 A -1	Communicate benefits for communities to comply with municipal water licences.	December 2011 and Ongoing	GNWT-ENR/ AANDC	Benefits directly communicated to communities by the Wek'èezhìi Land and Water Board, NWT Water Board, Ecology North, and AANDC.	Ongoing
4.1 A - 1	Form a progress assessment team.	September 2011	GNWT-ENR/ AANDC	GNWT-ENR and AANDC are the only interested team members to date.	In progress